

# Horizontal + Vertical Asymptote Practice

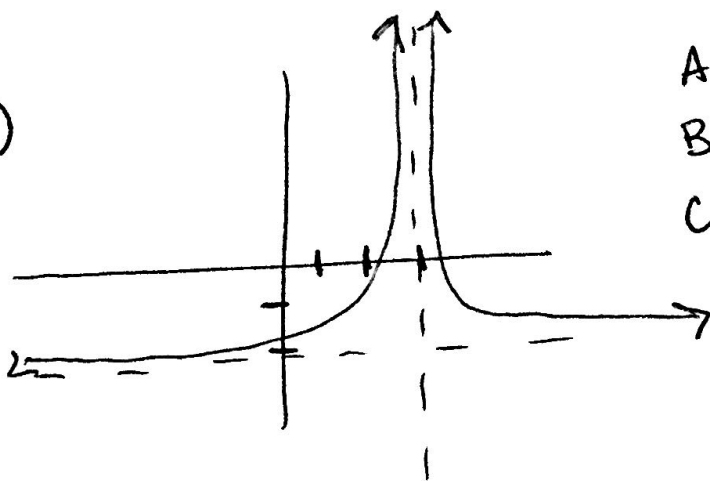
$$1) f(x) = \frac{3x^2}{(x-4)(x+2)}$$

$$2) f(x) = \frac{5}{x^2+10x+16}$$

$$3) f(x) = \frac{4x^3}{2x-5}$$

$$4) f(x) = \frac{6x^2+2x-1}{(x-3)(x+2)(x-5)}$$

5)



- A. Domain + range
- B. vertical asymptote
- C. Horiz asymptote

# Horizontal + Vertical Asymptote Practice

$$1) f(x) = \frac{3x^2}{(x-4)(x+2)}$$

$$V: x=4, x=-2$$

$$H: y=3$$

$$2) f(x) = \frac{5}{x^2+10x+16}$$

$$(x+8)(x+2)$$

$$V: x=-8, x=-2$$

$$H: y=0$$

$$3) f(x) = \frac{4x^3}{2x-5}$$

$$2x-5=0$$

$$2x=5$$

$$V: x=5/2$$

$$H: \text{none}$$

$$4) f(x) = \frac{6x^2+2x-1}{(x-3)(x+2)(x-5)}$$

$$V: x=3, -2, 5$$

$$H: y=0$$

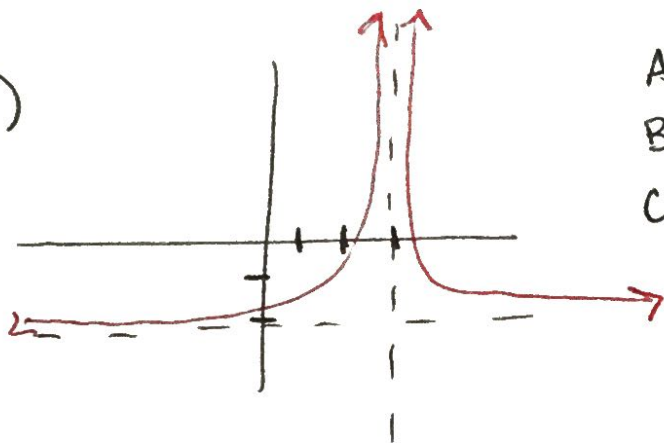
$$(-\infty, 3) \cup (3, \infty)$$

$$D: x \neq 3$$

$$y > -2$$

$$R: (-2, \infty)$$

5)



A. Domain + range

B. Vertical asymptote  $x=3$

C. Horiz asymptote  $y=-2$